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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,993	04/27/2001	Jacob Dreyband	033144-017	1373

7590   07/08/2003

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EXAMINER
CHANNAVAJJALA, SRIRAMA T

ART UNIT	PAPER NUMBER
2177	

DATE MAILED: 07/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

		Application No.	Applicant(s)
Office Action Summary		09/844,993	DREYBAND ET AL.
		Examiner	Art Unit	
		Srirama Channavajjala	2177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 April 2001</u> .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-36</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-36</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)   5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> .   6) ☐ Other: .

DETAILED ACTION

1.   Claims 1-36 are presented for examination.

Drawings

2.   The drawings filed on 4/27/2001 are <u>objected</u> by the Draftsperson under

37 CFR 1.84 or 1.152, formal drawings are required in response to this office action,

paper no. # 5.

Information Disclosure Statement

3.   The information disclosure statement filed on 4/27/2001, paper no. # 2 has been

considered and a copy was enclosed with this office action, paper no. # 5.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 1-3,15-17,29-31are rejected under 35 U.S.C. 102(a & b) as being

anticipated by Grady et al., UML for XML schema mapping specification published on

12/8/1999, page 1-8.

5.   As to Claims 1,15,29, Grady et al., teaches a system which including 'mapping a

descriptive language including a data description having a structure complexity into an

object oriented data presentation' [see Abstract, page 2, 1.1], Grady is directed to

standard object oriented language schemas, more specifically UML for XML schema

mapping as detailed in Abstract, further Grady also suggests for example object

management group where UML has been established certain standards, as best

understood by the examiner, descriptive language is to enhance future extensibility and

reusability of information in any embedded system for example XML is one of the

suitable tool as detailed in Abstract, 'identifying the data description' [page 2, item 2],

Grady specifically directed to mapping data types in XML schema to classes, further

Grady teaches data types semantics that are related to XML schema concept, see table

in page 3, 'crating an object oriented class including an internal static class wherein the

internal static class corresponds to the structure complexity of the data description'

[page 4, 1'5, page 6 example the XML schema], as best understood by the examiner,

static class analysis is a kind of data flow analysis that computes a set of classes for

each variable and expression in a method is integral part of object oriented language

such as C++, further it is noted that descriptive language is not only enhance future

extensibility but also reusability of classes and methods, for example a simple

static class is created as shown below and this is common knowledge object oriented

environment.

```
[code]
#include <iostream>
class test {
static int counter;
public:
int getcount() { return counter;}
test();
};
int test::counter = 0;

test::test() {
counter++;
}

int main(void) {
test xyz, bar;

cout << xyz.getcount() << "\n";
}
[/code].
```

6.   Claims 8,14,22,28,36 have been rejection in the analysis of above Claims and

are rejection on that basis.

7.   As to Claims 2,16,30 Grady teaches a system which including 'schema for an

XML text' [see page 6 1.8 XML schema].

8.   As to Claims 3,17,31, the limitations of this claim have been noted in the rejection

of above claim. In addition, Grady disclosed 'validating a schema including a class

description' [see Abstract, page 4 1.5 defining element type].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

9.   Claims 4-14,18-28,32-36 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Grady et al., UML for XML schema mapping specification, 12/08/99

as applied to claims 1,15,29 above, and further in view of Davidson et al., [hereafter

Davidson], US Patent No. 6083276.

10.   As to Claims 4,10,18,24,32, Grady teaches a system which including XML

schema mapping specification [see Abstract], however, Grady does not specifically

teach 'mutator method', although Grady suggests for example standard object oriented

design language that is widely used in software development area. On the other hand,

Davidson disclosed 'mutator method' [col 24, line 65-67, col 25, line 1-7], examiner

interpreting mutator method corresponds to Davidson's mutator methods as detailed in

col 25, line 4-6, fig 5.

It would have been obvious to one of the ordinary skill in the art at the time of

applicant's invention to incorporate the teachings of Davidson et al., into UML for XML

schema mapping specification of Grady et al., because both are directed to mapping the

schema [see Grady et al., Abstract, page 2: 1.1; Davidson: fig 1, element 122], both are

directed to descriptive language including a data description [see Grady et al.

XMLexample page6; Davidson: col 8, line 10-20, col 21, line 50-65, fig 3A-4A] and both

are directed to XML environment and are both from the same field of endeavor. One of

ordinary skill in the art at the time of the invention would have been motivated to

combine the references because that would have allowed users of Grady's UML for

XML schema mapping to control which relative combinations of specific methods,

classes satisfies his or her needs as suggested by Davidson et al [col 4, line 48-58].

11.   As to Claims 5,11,19,25, and 33, both Grady and Davidson teach 'validity

determination as to said schema' [see Grady: Abstract, page 2, 1.1; Davidson:

fig 3A-4A], Davidson teaches 'sending request including said schema from a user

to a remote server' [fig 1, col 7, line 30-40].

12.   As to Claims 6,12,20,26,34, the limitations of this claim have been noted in the

rejection of claim above. In addition, Davidson disclosed 'reading said schema into a

set of valid schema descriptor classes' [col 9, line 41-52], 'creating a set of objects out

of the schema wherein the occurrence of an object reflects validity' [col 10, line 4-20].

13.   As to Claims 7,13,21,27,35, the limitations of this claim have been noted in the

rejection of claim above. In addition, Davidson disclosed 'Java, C++,Smalltalk' [col 2,

line 21-29].

14.   As to Claims 9 and 23, Grady teaches a system which including 'mapping a

schema including a structural complexity into an object oriented language including a

functionality to provide a one to one correspondence between the structural complexity

of the semantical language' [see Abstract], Grady specifically directed to unified

modeling language which is a standard object oriented design language that is used by

the object management group, further XML schema is integrated for example

developing an object model that represented in DML, describing relationships between

XML and system to process it as detailed in page , introduction. 'receiving said schema'

[page 3, item 3, 1.3, section 4, page 6], schema corresponds to XML schema as

detailed in section 4, page 6, 'validating said schema' [see Abstract, page 4 1.5 defining

element type], 'creating a set of object oriented classes including a set of internal static

classes to provide a mapping of the schema into the object oriented language' [page 4,

1'5, page 6 example the XML schema], as best understood by the examiner, static class

analysis is a kind of data flow analysis that computes a set of classes for each variable

and expression in a method is integral part of object oriented language such as C++,

further it is noted that descriptive language is not only enhance future extensibility but

also reusability of classes and methods, for example a simple **static class** is created as

shown below and this is common knowledge object oriented environment.

```
[code]
#include <iostream>
class test {
static int counter;
public:
int getcount() { return counter;}
test();
};
int test::counter = 0;

test::test() {
counter++;
}

int main(void) {
test xyz, bar;

cout << xyz.getcount() << "\n";
}
[/code].
```

It is however, noted that Grady does not specifically teach 'instance

corresponding to the object oriented classes, compiling the instance, transmitting the

object oriented code', although compiling, instances, creating classes, methods and

functions are integral part of any object-oriented language environment. On the other

hand, Davidson disclosed 'instance corresponding to the object oriented classes' [col

24, line 51-67], 'compiling the instance', [col 24, line 65-67, col 25, line 1-7],

'transmitting the object-oriented code' [col 10, line 63-67, col 11, line 1-4].

It would have been obvious to one of the ordinary skill in the art at the time of

applicant's invention to incorporate the teachings of Davidson et al., into UML for XML

schema mapping specification of Grady et al., because both are directed to mapping the

schema [see Grady et al., Abstract, page 2: 1.1; Davidson: fig 1, element 122], both are

directed to descriptive language including a data description [see Grady et al.

XMLexample page6; Davidson: col 8, line 10-20, col 21, line 50-65, fig 3A-4A] and both

are directed to XML environment and are both from the same field of endeavor. One of

ordinary skill in the art at the time of the invention would have been motivated to

combine the references because that would have allowed users of Grady's UML for

XML schema mapping to control which relative combinations of specific methods,

classes satisfies his or her needs as suggested by Davidson et al [col 4, line 48-58].

Conclusion

The prior art made of record

a. Grady et al., UML for XML schema mapping

specification published on 12/8/1999, page 1-8.

b. US Patent No. 6083276

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure

c. US Patent No. 5794030

d. US Patent No. 6540142

e. US Patent No. 6569207

f. US Patent No. 6418446

g. US Patent No. 6026408

h. US Patent No. 5797137

i. US Patent No. 6490581

j. US Patent No. 5956730

k. US Patent No. 5809505

l. US Patent No. 6446256

m. Lucian et al., Mapping XML and relational schemas

with clio, 2 pages

n. Migrating from XML DTD to XML schema using UML,

Rational Software white paper, year 2000, pages 1-8

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is (703) 308-8538.   The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM Eastern Time. The TC2100's Customer Service number is (703) 306-5631.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene, can be reached on (703) 305-9790. The fax phone numbers for the organization where the application or proceeding is assigned are as follows:

703/746-7238   **(After Final Communication)**

703/746-7239   **(Offical Communications)**

703/746-7240   **(For Status inquiries, draft communication)**

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

sc
Patent Examiner.
June 27, 2003.